ANTICHOLINERGIC BURDEN VERSUS ANTICHOLINERGIC EFFECTS IN INSTITUTIONALIZED ELDERLY

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Background The natural aging process predisposes older people to anticholinergic side effects. Several tools were developed for the screening of anticholinergic drugs and evaluation of the anticholinergic burden. However, the association of the anticholinergic burden with adverse clinical outcomes is not completely established.

Purpose We aimed to compare different anticholinergic burden quantification tools regarding their ability to predict peripheral and central anticholinergic effects in institutionalized older people.

Method A retrospective cohort study with 125 patients was conducted in a nursing home in the Centre of Portugal. To calculate patients? anticholinergic burden Anticholinergic Drug Scale (ADS), Anticholinergic Risk Scale (ARS), Anticholinergic Cognitive Burden (ACB), and Drug Burden Index (DBI) were used. Barthel Index was used to assess elderly physical function questionnaire. The peripheral effects ?constipation?, ?dry mouth? and ?tachycardia? and the central effects ?falls? and ?dementia? were collected from patients? clinical records. Ethics approval was obtained from the University of Coimbra Medical School (105-CE-2015).

Findings Patients were 85.4 (SD=8.02) years old and 72.8% were female. They used 9.1 (SD=3.5) medicines and suffered from 3.1 (SD=3.2) conditions per patient. Anxiolytics, Sedatives and Hypnotics/Benzodiazepines (52.8%), Antidepressants (48.8%) and Antipsychotics (34.4%) were the main classes of drugs with anticholinergic effects found. Prevalence of anticholinergic effects were: constipation (59.2%), dry mouth (16.0%), tachycardia (13.6%), falls (18.4%), and dementia (44.0%). An association between the ADS score and the anticholinergic effect occurence was not identified. Positive associations were found between ?dementia? and high scores calculated by ARS and ACB scales (Mann-Whitney U=1358; p=0.003) and between ?constipation? and total anticholinergic load calculated by the DBI (Mann-Whitney U=1431; p=0.022). The ARS scale also presented a high prediction capability to identify elderly at high risk of physical dependence (p=0.005; r=-0.249).

Conclusion The anticholinergic burden calculated with different tools correlated differently with different anticholinergic effects. Funding: Marta Lavrador was supported by SFRH/BD/123678/2016.